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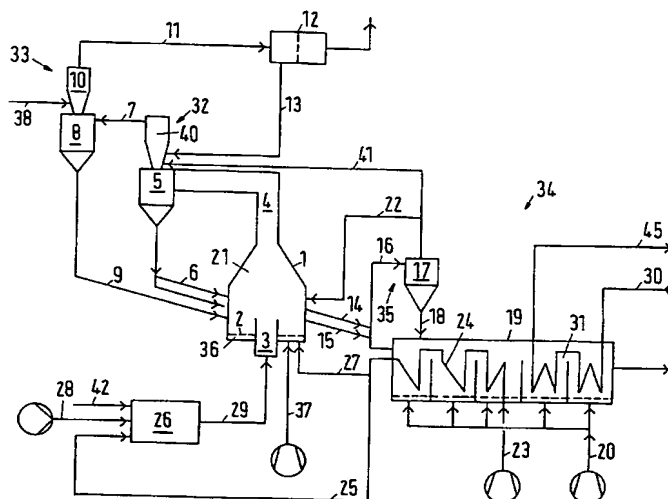
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(54) Title: METHOD AND APPARATUS FOR HEAT TREATMENT IN A FLUIDIZED BED



(57) **Abstract:** The present invention relates to a method for the heat treatment of fine-grained solids, in particular gypsum, in which the solids are heated to a temperature of 50 to 1000 °C in a fluidized bed reactor (1), and to a corresponding plant. To improve the energy utilization, it is proposed to introduce a first gas or gas mixture from below through a preferably central gas supply tube (3) into a mixing chamber (21) of the reactor (1), the gas supply tube (3) being at least partly surrounded by a stationary annular fluidized bed (2) which is fluidized by supplying fluidizing gas, and to adjust the gas velocities of the first gas or gas mixture as well as of the fluidizing gas for the annular fluidized bed (2) such that the particle Froude numbers in the gas supply tube (3) are between 1 and 100, in the annular fluidized bed (2) between 0.02 and 2 and in the mixing chamber (21) between 0.3 and 30.